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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,135	02/06/2006	Masafumi Matsunaga	NOR-1267	8893

37172 7590 12/14/2009

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EXAMINER	
HAN, KWANG S	

ART UNIT	PAPER NUMBER
1795	

NOTIFICATION DATE	DELIVERY MODE
12/14/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/567,135	MATSUNAGA, MASAFUMI	
	Examiner	Art Unit	
	Kwang Han	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

ELECTROLYTE MEMBRANE, ELECTROLYTE MEMBRANE COMPOSITE, METHOD OF MANUFACTURING ELECTROLYTE MEMBRANE COMPOSITE, ELECTROLYTE MEMBRANE-ELECTRODE ASSEMBLY FOR FUEL CELL, METHOD OF MANUFACTURING ELECTROLYTE MEMBRANE-ELECTRODE ASSEMBLY FOR FUEL CELL, AND FUEL CELL

Examiner: K. Han SN: 10/567,135 Art Unit: 1795 December 10, 2009

Detailed Action

1. The Applicant's Request for Reconsideration filed on August 28, 2009 was received.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

4. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 6475249) in view of Banerjee et al. (US 5415888) is maintained.

Regarding claims 13 and 15, Hsu discloses a membrane electrode assembly for a fuel cell [Abstract] comprised of an electrolyte membrane having a first and second side with a mask on each side having a window (5:39-51). Having a plurality of holes is not significant since the courts have held that mere duplication of parts has no

patentable significance unless a new and unexpected result is produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (MPEP 2144.04). Hsu is silent towards the mask being removably attached to the electrolyte membrane.

Banerjee teaches a screen mask which is temporarily used to form an electrode layer having a desired size and configuration on the surface of the ion exchange membrane (7:18-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the mask of Hsu to be removably attached to the electrolyte membrane because Banerjee teaches a mask is temporarily used to form the electrode layer.

Regarding claim 14, Hsu discloses the window to be shaped to form the catalyst layer (5:39-51).

5. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. and Banerjee et al. as applied to claim 13 above, and further in view of Kosako et al. (US 2004/0209155) and Iriya et al. (WO 03/043818, using US 2005/0064162 for citation and translation) is maintained.

Regarding claims 16 and 18, Hsu and Banerjee are silent towards a gas barrier sheet being removably attached to the first masking member.

Kosako teaches a method for forming a catalyst layer using a polypropylene film which is peeled from the catalyst layer to form the sides of the electrolyte membrane by a transfer method [0116]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a polypropylene film with the mask of Hsu and

Banerjee because Kosako teaches this film allows for the catalyst layer to be formed by a transfer method. Kosako is silent towards the polypropylene film having gas barrier properties.

Iriya teaches a polypropylene based film to have properties of excellent adhesion, flexibility, gas barrier properties, etc. [Abstract]. It would have been obvious to one of ordinary skill in the art at the time of the invention that the polypropylene film would be a gas barrier because Iriya teaches that polypropylene film material has this property.

Regarding claims 17 and 19, the teachings of Hsu, Banerjee, Kosako, and Iriya as discussed above are herein incorporated. Iriya teaches an adhering assistant applied to the surface of the polypropylene film to promote autohesion of the film [0028].

Regarding claim 22, the teachings of Hsu, Banerjee, Kosako, and Iriya as discussed above are herein incorporated. The masking layer of Hsu and the gas barrier sheet Kosako would form an electrolyte membrane composite comprising a plurality of sheets.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. and Banerjee et al. as applied to claim 13 above, and further in view of Shimoaka (US 2004/0191956) and Iriya et al. (WO 03/043818, using US 2005/0064162 for citation and translation) is maintained.

The teachings of Hsu and Banerjee as discussed above are herein incorporated. Hsu is silent towards the material for the mask material. Banerjee teaches the mask material can be any material having satisfactory strength (7:38-42).

Shimoaka teaches a print mask used to form layers for an electronic device comprised of a resin material such as polypropylene [0041, 0042]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use polypropylene as the material for the mask because Shimoaka teaches polypropylene is an appropriate material to form a mask for producing layers on an electronic device. Shimoaka is silent towards the polypropylene material to be an autohesion material.

Iriya teaches an adhering assistant applied to the surface of a polypropylene film to promote autohesion of the film [0028]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the polypropylene film of Hsu, Banerjee, and Shimoaka to have an adhering assistant applied to the surface of the polypropylene film because Iriya teaches this promotes for the autohesion of the film.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. and Banerjee et al. as applied to claim 13 above, and further in view of Banerjee et al. (US 6156451, herein after referred to as Banerjee '451) is maintained.

The teachings of Hsu and Banerjee as discussed above are herein incorporated. Hsu and Banerjee are silent as to the electrolyte membrane being adapted to be wound into a roll stock.

Banerjee '451 teaches a process for making a composite ion exchange membrane which is performed in a continuous fashion using roll stock (8:38-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the process of making a membrane using a roll stock because Banerjee '451 teaches it allows for the process to occur in a continuous fashion.

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al and Banerjee et al. as applied to claim 13 above, and further in view of Iriya et al. (WO 03/043818, using US 2005/0064162 for citation and translation) is maintained.

The teachings of Hsu and Banerjee as discussed above are herein incorporated. Hsu and Banerjee are silent toward a gas barrier wrapping material disposed about the electrolyte membrane and the first masking member.

Iriya teaches a wrap film material which has excellent adhesion, transparency, heat resistance, flexibility, and gas barrier properties [Abstract] for the purpose of packaging. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a film wrap with gas barrier properties to wrap the electrolyte membrane of Hsu and Banerjee because Iriya teaches this material provides packaging which protects the membrane.

Response to Arguments

9. Applicant's arguments filed August 28, 2009 have been fully considered but they are not persuasive.

Applicant's principal arguments are:

(a) The Hsu reference that only a single electrode is present on the membrane and only a single hole is required in the mask and the modification to Hsu would not have been made by one of ordinary skill in the art,

(b) The Banerjee reference fails to disclose the screen mask is removably attached to the membrane and that the screen mask is between the screen and membrane.

In response to Applicant's arguments, please consider the following comments:

(a) The Hsu reference is directed towards the method of manufacturing a membrane electrode assembly using a masking member to form the catalyst layer on the membrane as discussed in the rejection. It is well known and obvious to one of ordinary skill in the art that a mere duplication of the parts including the number or size of the masks and hole provided within them to reproduce the same component is not a patentable distinction. To multiply the number of catalyst layers formed using common method of duplication for mass production does not provide a new and unexpected result,

(b) As discussed in the rejection, Banerjee discloses the screen to be temporarily used to form an electrode layer, which suggests the ability to remove the screen. Banerjee discusses that conventional screen printing processes are used (7:18-42), which to one of ordinary skill in the screen printing art would have found

obvious, and provides for a removable attachment of a screen mask and for the mask to be between the screen and the membrane. Furthermore, the claim limitations do not positively recite the screen mask is between the screen and the membrane.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact/Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang Han whose telephone number is (571) 270-5264. The examiner can normally be reached on Monday through Friday 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. H./
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795